IN THE CLAIMS:

1. (Previously Presented) A method of manufacturing a collimator comprising:

providing a plurality of metal foil layers;

generating a computer image of a plurality of said formed metal foil layers for use in forming a collimator;

forming a plurality of metal foil layers into specific shapes by use of at least one lithographic technique;

stacking and aligning said plurality of formed metal layers; and,

connecting together said plurality of formed metal layers to form said collimator.

2. (Original) The method as defined in claim 1, wherein a plurality of said metal foil layers each have an average density of at least about 8.5 g/cm^3.

3. (Original) The method as defined in claim 1, wherein a plurality of said metal foil layers each have an average thickness of less than about 400 microns.

4. (Original) The method as defined in claim 1, wherein said at least one lithographic technique includes photo-etching.

5. (Original) The method as defined in claim 1, wherein said step of forming includes the formation of at least one alignment opening in at least one metal foil layer.

6. (Original) The method as defined in claim 5, wherein said step of stacking and

aligning includes the use of at least one alignment opening formed in a plurality of metal foil layers.

7. (Original) The method as defined in claim 1, wherein said step of connecting together includes brazing together a plurality of metal foil layers.

8. (Original) The method as defined in claim 7, including the step of coating at least one side of a plurality of metal foil layers with a brazing metal.

9. (Original) The method as defined in claim 7, wherein said brazing metal has an average density of at least about 8.5 g/cm^3.

10. (Original) The method as defined in claim 7, wherein said brazing metal has an average coating thickness of less than about 10 microns.

11. (Original) The method as defined in claim 7, wherein said step of brazing includes vacuum brazing.

Claim 12 (Canceled).

13. (Original) The method as defined in claim 1, including the step of generating a computer image of said collimator and then sectioning said computer image of said collimator into a plurality of sectional images that correspond to a plurality of said formed metal foil layers.

14. (Previously Presented) The method as defined in claim 1, including the step of forming at least one mask from at least one of said computer images and at least partially forming at least one of said formed metal foil layers using said mask.

15. (Original) The method as defined in claim 13, including the step of forming at least one mask from at least one of said sectional images and at least partially forming at least one of said formed metal foil layers using said mask.

16. (Previously Presented) A collimator formed of a plurality of metal layers, each of said metal layers connected together by a brazing metal having a different composition and a lower melting temperature than said metal of said metal layers, said metal layers include a metal selected from the group consisting of bismuth, cadmium, cobalt, erbium, hafnium, iridium, niobium, osmium, palladium, rhenium, rhodium, ruthenium, tantalum, technetium, terbium, thallium, thulium, tungsten, or combinations thereof.

17. (Original) The collimator as defined in claim 16, wherein a plurality of said metal layers each have an average density of at least about 8.5 g/cm^3.

18. (Original) The collimator as defined in claim 16, wherein a plurality of said metal layers each have an average thickness of less than about 400 microns.

19. (Original) The collimator as defined in claim 16, wherein said brazing metal has an average density of at least about 8.5 g/cm^3.

20. (Original) The collimator as defined in claim 16, wherein said brazing metal has an average coating thickness of less than about 10 microns.

21. (Previously Presented) The collimator as defined in claim 16, wherein said brazing metal includes a metal selected from the group consisting of copper, gold, lead, nickel, platinum, silver, or combinations thereof.

22. (Previously Presented) The collimator as defined in claim 16, wherein at least one of said metal layers includes tungsten and at least one layer of said brazing metal includes nickel.

23. (Previously Presented) A collimator at least partially formed of a plurality of metal layers that are connected together by a brazing metal, a plurality of said metal layers formed by an etching process, at least one layer of said brazing metal having a different composition and a lower density and a melting temperature that is at least 100°C less than a melting temperature of at least one of said metal layers, at least one layer of said brazing metal having a density of at least about 8.8 g/cm^3, at least one of said layers of brazing metal having a thickness prior to heating of about 0.5-4 microns, a plurality of said metal layers having a thickness of about 40-150 microns.

24. (Previously Presented) The collimator as defined in claim 23, wherein at least a plurality of said metal layers include a metal selected from the group consisting of bismuth, cadmium, cobalt, erbium, hafnium, iridium, niobium, osmium, palladium, rhenium, rhodium, ruthenium, tantalum, technetium, terbium, thallium, thulium, tungsten, or combinations thereof.

25. (Previously Presented) The collimator as defined in claim 23, wherein a plurality of layers of said brazing metal includes a metal selected from the group consisting of copper, gold, lead, nickel, platinum, silver, or combinations thereof.

26. (Previously Presented) The collimator as defined in claim 24, wherein a plurality of layers of said brazing metal includes a metal selected from the group consisting of copper, gold, lead, nickel, platinum, silver, or combinations thereof.

27. (Previously Presented) The collimator as defined in claim 26, wherein a plurality of said metal layers includes tungsten and a plurality of layers of said brazing metal includes nickel.

28. (Previously Presented) A method of manufacturing a collimator comprising:

a) generating a computer image of the collimator;

b) sectioning the computer generated image;

c) forming sections of the collimator from a metal material based on each of the drawing sections, a plurality of said sections formed of metal foil layers; and,

d) connecting said sections to form a collimator that substantially matches the computer generated drawing of the collimator.

29. (Previously Presented) The method as defined in claim 28, wherein at least one of said metal foil layers is formed by use of at least one lithographic technique.

30. (Previously Presented) The method as defined in claim 28, including the steps of

stacking and aligning said plurality of metal foil layers and heating said metal foil layers to connect together said metal foil layers.

31. (Previously Presented) The method as defined in claim 29, including the steps of stacking and aligning said plurality of formed metal layers and heating said metal foil layers to connect together said metal foil layers.

32. (Previously Presented) The method as defined in claim 28, wherein a plurality of said metal foil layers are connected together by a brazing metal, said brazing metal having a different composition and a lower density and a melting temperature that is at least 100°C less than a melting temperature of said metal foil layers, said brazing metal having a density of at least about 8.8 g/cm^3, said brazing metal having a thickness prior to heating of about 0.5-4 microns, said metal foil layers having a thickness of about 40-150 microns.

33. (Previously Presented) The method as defined in claim 31, wherein a plurality of said metal foil layers are connected together by a brazing metal, said brazing metal having a different composition and a lower density and a melting temperature that is at least 100°C less than a melting temperature of said metal foil layers, said brazing metal having a density of at least about 8.8 g/cm^3, said brazing metal having a thickness prior to heating of about 0.5-4 microns, said metal foil layers having a thickness of about 40-150 microns.

34. (Previously Presented) The method as defined in claim 28, wherein a plurality of said metal foil layers includes a metal selected from the group consisting of bismuth, cadmium, cobalt,

erbium, hafnium, iridium, niobium, osmium, palladium, rhenium, rhodium, ruthenium, tantalum, technetium, terbium, thallium, thulium, tungsten, or combinations thereof.

35. (Previously Presented) The method as defined in claim 33, wherein a plurality of said metal foil layers includes a metal selected from the group consisting of bismuth, cadmium, cobalt, erbium, hafnium, iridium, niobium, osmium, palladium, rhenium, rhodium, ruthenium, tantalum, technetium, terbium, thallium, thulium, tungsten, or combinations thereof.

36. (Previously Presented) The method as defined in claim 32, wherein said brazing metal includes a metal selected from the group consisting of copper, gold, lead, nickel, platinum, silver, or combinations thereof.

37. (Previously Presented) The method as defined in claim 35, wherein said brazing metal includes a metal selected from the group consisting of copper, gold, lead, nickel, platinum, silver, or combinations thereof.

38. (Previously Presented) The method as defined in claim 31, wherein a plurality of said metal foil layers include tungsten and a plurality of layers of said brazing metal includes nickel.

39. (Previously Presented) The method as defined in claim 37, wherein a plurality of said metal foil layers includes tungsten and a plurality of layers of said brazing metal includes nickel.